

USSN: 10/563,601  
Attorney Docket: 2003.005 US  
Response to Office Action of August 20, 2008

## REMARKS

In the Office Action of August 20, 2008, the Examiner rejected claims 4, 5, 7 and 10 under 35 U.S.C. § 101 for being directed to non-statutory subject matter.

Claims 4 and 7 are now amended to recite an isolated nucleic acid and an isolated cDNA fragment. Accordingly, it is believed that the rejection under 35 U.S.C. § 101 is now overcome.

Claims 11-15 stand rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. The Examiner objected that the specification does not enable a vaccine comprising the isolated sequence of amino acids 17 to 180 of SEQ ID NO: 2, wherein the sequence provides prophylactic or therapeutic treatment of an infection or its clinical signs caused by an organism of the family Babesiidae.

It is respectfully submitted that the present amendment to claim 1, which is not a limiting amendment, but clarifies that the claimed isolated amino acid sequence comprises the specific amino acid sequence of amino acid 17 to 180 of SEQ ID NO: 2, overcomes the rejection under 35 U.S.C. § 112, first paragraph.

Claim 11, directed to a vaccine, is further amended to recite that the sequence comprised is an isolated amino acid sequence comprising amino acids 17 to 233 of SEQ ID NO: 2. Support for this amendment is found in the specification on page 39, line 4, defining the recombinant protein of His-Bc28.1. This is the protein used to formulate the vaccines that were administered to rabbits to obtain antiserum in Example IV, beginning on page 49 of the specification. It may be noted that V<sup>16</sup>-K<sup>233</sup> in line 4 of page 39 of the specification refers to Valine (actually amino acid 17) and Lysine, amino acid 233 in SEQ ID NO:2. The labelling of Valine as amino acid 16 in line 4 on page 39 is an obvious inadvertent error, which is evident from a review of the sequence provided in SEQ ID NO:2.

Claim 19 stands rejected under 35 U.S.C. 102(b) for being anticipated by Vettore et al. The rejection of claim 19 for anticipation by Vettore et al is respectfully traversed. Applicants, respectfully, do not find the elements of the diagnostic test as claimed to be disclosed

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in this reference relating to expressed sequence tags of sugar cane. Withdrawal of this rejection is requested.

In view of the above with the present amendments, it is believed that claims 1, 2, 4, 5, 7-15 and 19-21 are in condition for allowance. Favorable action is solicited. The Examiner is requested to call the Undersigned if any issues arise that can be addressed over the phone to expedite examination of this application.

Applicants do not believe that any other fee is due in connection with this filing. If, however, Applicants do owe any such fee(s), the Commissioner is hereby authorized to charge the fee(s) to Deposit Account No. **02-2334**. In addition, if there is ever any other fee deficiency or overpayment under 37 C.F.R. §1.16 or 1.17 in connection with this patent application, the Commissioner is hereby authorized to charge such deficiency or overpayment to Deposit Account No. **02-2334**.

Respectfully submitted,



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